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10/614,532	07/07/2003	David H. McFadden	54330/322597	9062

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EXAMINER

SUERETH, SARAH ELIZABETH

ART UNIT	PAPER NUMBER
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3749

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04/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/614,532	Applicant(s) MCFADDEN, DAVID H.	
	Examiner Sarah Suereth	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 95-111, 113, 115 and 116 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 95-111, 113, 115 and 116 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/31/09 & 1/16/09(2)</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/31/09 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 95-109** are rejected under 35 U.S.C. 102(b) as being anticipated by **U.S. Patent No. 4,409,453 to Smith** ("Smith") in view of **U.S. Patent No. 4,737,373 Forney** ("Forney").

Smith discloses in the specification and figures 1-18 an invention in the same field of endeavor as applicant's invention and as described in applicant's claims (note the figures in Smith are disclosed with roman numerals but have been reference below using corresponding numbers 1-18).

In particular, in regard to at least claim 95, Smith shows a system and method of speed cooking a food product with gas comprising the steps of: providing a housing (1) with a bottom (8'), top(2'), left and right sides (4' and 6') defining an oven cavity (79) including a cooking rack (T) to support food (P);

By the limitation "a first means for directing gas within the oven cavity", it appears applicant intends to invoke 112, 6th paragraph. Applicant claims four similar means for directing gas in claim 95. A search of applicant's specification shows that applicant discloses that the means for directing gas comprise four nozzle plates (23a,23b,27a,27b) and nozzles (100a,100b,29a,29b) mounted to the plates [bottom of paragraph 66]. These plates and nozzles together are regarded to comprise the means for directing gas.

Smith discloses a similar means for directing gas (nozzle plates 82,83 and nozzles 90); however, Smith shows the nozzle plates as comprising two integral nozzle plates along the top and bottom of the oven with associated nozzles (see Figure 2), instead of a total of four separate nozzle plates.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Smith nozzle plates to each comprise two sections instead of one section as a matter of obvious design choice. Mounting nozzles on either a single plate extending across the top of the oven or on multiple plates spanning the oven would allow the oven to operate in the same manner.

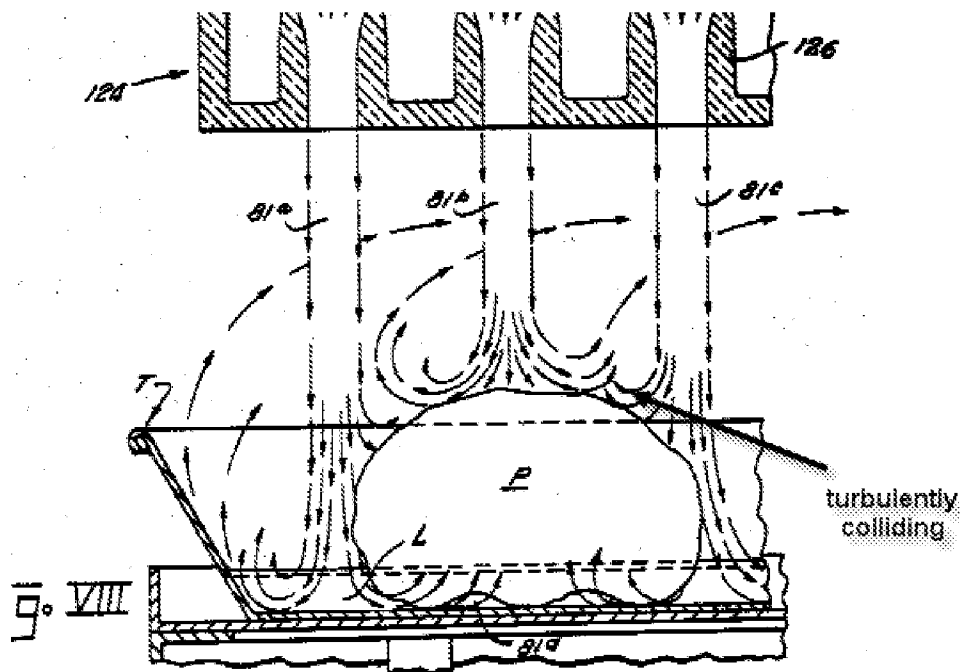
Also, Smith shows the nozzles mounted in two straight horizontal lines, to impinge the food vertically, instead of from the oven sides.

Forney discloses a convection oven having nozzles angled to impinge the food from the sides, top and bottom in order to evenly cook all the sides of a food product, instead of only the top and bottom (col. 3, lines 19-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Smith nozzle arrangement to angle the nozzle plates, in order to surround the food product, and to evenly cook all sides of the food (col. 3, lines 19-25).

Regarding the limitation that the food is cooked by turbulently colliding gas flows, gas from the Smith openings is provided in the form of jets (81). As shown particular in Fig. 8, a first gas jet (81b) and a second gas jet (81c) are provided to strike a food product (P) and are considered to collide turbulently in close proximity to a surface of the food product to desirably enable "very rapid heat transfer and very rapid water vapor removal from the surface of the product" (see col. 10, lines 45-51). The following is a segment of Fig. 8 of Smith to further illustrate what the examiner considers to be "turbulently colliding" gas flows:

Segment of Fig. 8 of Smith
(the examiner has added lead arrow and text)



Further, the examiner notes that Smith expressly describes that jets (81), when striking a solid surface will be transformed, into a "turbulent mushroom shaped pressure area" (see col. 11, lines 6-11). While this discussion is in the context of the jets striking the bottom of the food product, the examiner considers that a person of ordinary skill in the art would recognize that the "turbulent mushroom shaped pressure area" would also result on the top of the food product (as shown for instance in Fig. 8 of Smith).

Regarding the limitation of "directing gas from the left side of the oven rather than from the top wall", the examiner considers that when the nozzle plates of Smith are

angled as taught by Forney, the resulting nozzle plates would cause the air to impinge on the food from a sideways direction instead of a vertical direction.

In regard to at least claim 96, see heating elements (50).

In regard to at least claims 97, 100, 102, 103, 107, and 108, flow means (30) for controlling the air flow is described as a “variable speed motor” (see col. 6, lines 4-9) and the velocity of the jets (81) may be optimized (see col. 9, lines 9-15), which is regarded as the recited “adjustably damping”, for controlling the heating of the food to provide “very rapid heat transfer” (col. 10, lines 47-48).

Regarding claim 107, controlling the speed of the air flow impinging on the food obviously controls the rate of cooking the food product.

In regard to at least claim 98, at least Fig. 8 of Smith suggests multiple impingement points of the air and food product causing “simultaneously colliding the gas at multiple locations about the selected surfaces of the food product” as recited (see at least col. 10, lines 45-56).

In regard to at least claim 99, see at least Figs. 2 and 8 and note that air is provided to the oven cavity via conduits (chambers above plates 82 or 122) and exhausted from the oven cavity (note arrows in each Fig showing air passed from the oven cavity).

In regard to at least claim 101, as shown in Fig. 6, multiple lower tubes (90) are arranged below a food product (112) forming third and fourth means for directing gas. These tubes direct jets of air (81) to strike the lower surface of the food product (112). The jets of air from adjacent tubes are considered to collide in close proximity to a

surface of the food product as recited. These gas directing means are located both below the food product and above the bottom of the oven cavity as recited (see Figure 2).

In regard to at least claims 104, 105 and 106, jet (81) velocity is in a range between 500 and 7,000 feet per minute (see col. 9, lines 5-6) meeting applicant's recited ranges.

Regarding claim 109, the examiner considers the jets of Smith, when arranged as taught by Forney, would perform the method steps as claimed.

4. **Claims 110,111,113,115,116** are rejected under 35 U.S.C. 103(a) as being unpatentable over **U.S. Patent No. 4,409,453 to Smith** ("Smith") in view of **U.S. Patent No. 4,737,373 Forney** ("Forney"), further in view of **U.S. Patent No. 5,166,487 to Hurley et al.** ("Hurley").

Smith in view of Forney, as discussed above, discloses substantially all the limitations of claims 110-116 with the possible exception of directing microwave energy from the opposing side of the cooking chamber. Smith shows a microwave energy generator (58) including a microwave waveguide plate (76). However, Smith appears to only suggest the use of a single microwave energy generator instead of the dual generators claimed by applicant.

Regarding claim 113, Smith shows nozzle plates along the bottom of the oven cavity. As discussed above, when arranged in a curved path as taught by Forney, some of the bottom jets would be angled as claimed.

In regard to at least claim 115, again note the velocity range of 500 to 7,000 feet per minute (see col. 9, lines 5-6).

In regard to at least claim 116, as shown at least in Fig. 7, the opening at the top right side of the combustion chamber receiving exhaust air is considered an opening at the top of the cooking chamber as recited.

Hurley teaches a cooking method in the same field of endeavor as both applicant's invention and Smith. In Hurley, a cooking oven functions to provide convective and microwave heating (see abstract). The microwave heating is enabled by multiple microwave generating magnetrons (12 and 14) that are desirably arranged "at opposite ends of the cooking chamber" (see col. 5, lines 54-55) to direct microwave energy (15) to a food product.

Therefore, in regard to claims 110-116, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cooking method of Smith to incorporate directing microwave energy at opposite sides of the cooking chamber as taught in Hurley as this location is expressly recognized in the art as desirable for directing microwave energy to a food product (see Hurley, col. 5, lines 47-55).

Response to Arguments

Applicant's arguments filed 1/16/09 have been carefully considered but they are moot in view of newly cited reference Forney.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Suereth whose telephone number is (571)272-9061. The examiner can normally be reached on Mondays & Tuesdays 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister, can be reached (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Suereth/
Examiner, Art Unit 3749

/Steven B. McAllister/

Supervisory Patent Examiner, Art Unit 3749

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